COST Action TD1202: Mapping and the Citizen Sensor

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Scientific context and objectives

• **Background / Problem statement:** Accurate and timely maps are a fundamental resource but their production in a changing world is a major scientific and practical grand challenge. The rise of citizen sensors provides immense potential to radically change mapping but concerns with its quality. The Action will evaluate the utility of citizen sensors in mapping, debate means to encourage standardisation, coordination of activity and identify how mapping can proceed with imperfect data.

• **MoU objectives:** The aim of the Action is to enhance the role of citizen sensing in mapping.
Working groups:

- **WG1** – Review current sources of VGI and VGI properties (especially quality).
  
  *Linda See*  
  IIASA

- **WG2** – Identify ways to engage with volunteer community. Begin review of volunteer nature and incentives *etc.*
  
  *Normal Kerle*  
  ITC/University of Twente

- **WG3** – Identify data needs and desires (especially of NMAs). Sensitivity of methods to common errors.
  
  *Glen Hart*  
  Ordnance Survey

- **WG4** - Identify data needs and desires. Sensitivity of methods to common errors.
  
  *Cidália Fonte*  
  Uni. Coimbra

We welcome additional researchers / countries.
- also, Short-Term Scientific Missions (STSMs)

That is – build the foundations. Review the fundamentals while growing and being outward looking.
For example – WG4 ‘map validation’

- What is the authoritative approach – what are its limitations?
- What are the opportunities of citizen sensing – alone/in combination with authoritative data?
- Nature of VGI – typical errors etc?
- Sensitivity of validation methods to error types and magnitudes?
- Recommendations for use of VGI? When could it be used? Likely problems?
Vision and achievement

- Enhance the role of citizen sensing in mapping. Benefits from individual to organisations as well as research community.
- Disseminate outputs via a range of methods to diverse audience that change practice (volunteers to standard academic research community).
- Springboard for research – e.g. joint publications, research grants etc.

That is – build the foundations, define current status of citizen sensing in mapping.

Looks to engage other communities
- August 2013 – cartographic community (ICA conference)
- May 2014 – GIS community (AGILE, Spain)
- July 2015 – Remote sensing community (Italy)

Publications linked to each (post-Dresden) and associated with Spanish and Italian conferences.
Started in November 2012

Currently mostly in a review phase

Still more to do:
- Links to volunteer community
- Links to National Mapping Agencies and other relevant bodies.
- Further links to IC1203 / ENERGIC
- Links to FP7 projects / JRC
- etc.
Community Mapping


Aberley (1993) and King and Clifford (1985) produces an agenda for community mapping:

- Reasserting indigenous people's rights
- Re-publishing the past for contemporary consumption advancing local claims to land
- Re-mapping lost place-names
- Protecting local wildlife in the face of development
- Conserving landscapes threatened by agribusiness
- Protesting against planners
- Opposing military power
- Rejecting surveillance
- Showing the powers-that-be what might be locally distinctive.

Hence, by nature, Community Mapping = Volunteered Geographic Information
August 2011
September 2011
Purpose and Usage

• Disaster modeling and risk reduction
• Understanding transportation and traffic flows
• Water and sanitation provision
• Community voice
• Citizen media